REMARKS

In the Advisory Action, the Examiner noted that claims 1, 3, 4, 6, 7, 9-11, and 16-24 are rejected. Amendment E, filed November 13, 2003 in response to the Final Office Action dated September 3, 2003, cancelled claims 23 and 24. The Examiner rejected Applicants' request for reconsideration. Applicant hereby traverses this rejection and herein submits new claims 25, 26 and 27. Thus, claims 1-4, 6-7, 9-11, 16-22 and 25-27 remain pending in this application. In view of new claims 25, 26 and 27 and the accompanying Request for Continued Examination (RCE) Transmittal, examination of the application is requested.

In the Advisory Action, the Examiner asserted *"Murad, et al.* does disclose the sub-cube in col. 8, lines 15-20, where the two input calling pattern cubes are represented by two instances of the second level profile. In this case, the second level profile represents extracted call prototypes." Applicants disagree with this assertion. *Murad* uses a Cumulative Distribution-based (CD) distance function in determining a genuine dissimilarity between any two instances of a second level profile (see col. 8, lines 15-20). Applicants' claims are directed to volume based calling pattern cubes (for example, see new claim 25).

Next, the Examiner asserts that *"Murad, et al.* also discloses that the sub-cubes are each treated as a bag, and cell-wise comparison results are summarized based on bag overlap in both Fig. 4C, and in col. 5, lines 23-45. This summarization is represented by clustering." Applicants disagree with this assertion also. Figure 4C merely shows a cluster and column 5, lines 23-45, refer to clustering where a daily profile is assigned to its closest cluster center and cluster centers are recalculated as the Euclidean centroid of daily profiles assigned to the corresponding cluster center (see col. 5, lines 38-42). *Murad, et al.* then teaches a "sum of squared distances" between daily profiles and their associated cluster center. *Murad, et al.* then teaches an iterative procedure for recalculating a new cluster center as the Euclidean centroid of the locally assigned daily profiles accomplishes the minimization operation (see col. 5, lines 47-51). *Murad, et al.* then uses a Cumulative Distribution-based (CD) distance

function based on a cumulative distribution (see col. 5, lines 52-67). Applicants assert that this clustering operation is not the same as treating a sub-cube as a bag and performing cell-wise comparison results based on bag overlap. By deriving volume based calling pattern cubes from profile cubes using a probability distribution-based calling pattern, by treating a sub-cube as a bag, and by summarizing cell-wise comparison results based on bag overlap (see claims 11 and 25), Applicants claim an algebraic structure for summarizing cell-wise comparison results in a manner that differs from the technique taught by *Murad, et al*. *Murad* uses a clustering technique based on distance measurements; whereas Applicants' technique uses bag overlap. There is a difference between the two techniques which was recited at page 14, lines 11-14, of the originally filed application; namely, "one [technique] treats a sub-cube as a bag, and summarizes cell-wise comparison results based on <u>bag overlap</u>. The other [technique] treats a sub-cube of a vector, and summarizes cell-wise comparison results based on <u>vector distance</u>." [Emphasis added.] The technique of bag overlap based cube similarity is described starting at page 14, line 21, Section D, of the originally filed application. The technique for vector distance based cube similarity is described at page 17, line 6, in Section E, of the originally filed application. *Murad* teaches yet another technique using a Cumulative Distribution based (CD) distance function which is somewhat analogous (but not identical) to the vector distance technique. Clearly, *Murad* does not teach the use of bag overlap when performing a cube similarity comparison.

Applicants herein affirm arguments made in Amendment E which were entered into the record by the Examiner. New claims 25-27 provide further limitations relating to a bag overlap based cube similarity comparison technique.

CONCLUSION

For all the reasons advanced above, Applicant respectfully submits that the application is in condition for allowance, and action to that end is respectfully requested. If the Examiner's next anticipated action is to be

anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview before issuance of any such subsequent action.

Respectfully submitted,

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February 3, 2004
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